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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,383	12/03/2003	Yoshihiro Someno	9281-4722	5589

7590 09/28/2004  
Brinks Hofer Gilson & Lione  
P.O. Box 10395  
Chicago, IL 60610

EXAMINER

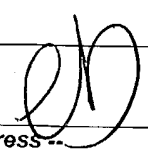
LAM, CATHY FONG FONG

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 09/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/726,383	SOMENO ET AL.	
	Examiner	Art Unit	
	Cathy Lam	1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) 3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12-03-2003</u> | 6) <input type="checkbox"/> Other: ____  |

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1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-2, drawn to a functional multilayer film, classified in class 385, subclass 49+.
  - II. Claim 3, drawn to a method for manufacturing a functional multilayer film, classified in class 33, subclass 645.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the method as claimed can be used to make a different product such as a multilayer wiring board. The product as claimed can be made by a different process such as by manually placing each fine metallic body into the grooves of the substrate, then bonding the plurality of substrates together by adhesive.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Atty: G. Siller on September 25, 2004 a provisional election was made with traverse to prosecute the invention of group I, claims 1-2. Affirmation of this election must be made by applicant in replying to this Office

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action. Claim 3 is withdrawn from further consideration by the examiner, 37

CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 112***

6. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is vague and indefinite, as it is not clear whether or not it means different dielectric materials between thin films and different metallic materials between the fine metallic bodies? Clarification is required.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pugh, III (US 4046454) or Miller (US 3864018) in view of Li et al (US 6377732).

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Both Pugh, III and Miller teach a waveguide structure comprised of optical fibers.

Pugh teaches a plurality of chips (10,11) each has uniformly spaced V-grooves (14) formed on the chip's surface. Each groove (14) receives a single optical fiber (22) (col 2 L 17-20 & Figs. 1-2).

The chips (10,11) are made of dielectric material such as fused quartz or crystalline silicon and are stacked together (col 3 L 48-49).

Miller discloses a multiple linear arrays of optical fiber. The structure is comprised of chips (10) having a plurality of spaced grooves (11) and optical fibers (15) are placed into the grooves (11) (col 2 L 35-39 & Fig. 4).

Both Pugh and Miller are silent about the optical fiber is a metallic material.

Li discloses an optical waveguide comprised of a silicon substrate (10), groove and an optical fiber (20).

A V-groove is formed in the substrate (10) and an optical fiber (20) is formed into the groove (22). The optical fiber (20) is metal coated fiber (34) (col 5 L 12-13, Figs. 2-3).

In view of the prior art teachings, it would have been obvious to fabricate a functional multilayer film with a metallized optical fiber because it enhances the bonding between the fiber and the substrate.

Regarding to claim 2, the examiner is taking the position that applicant is claiming that the dielectric thin film and the fine metallic bodies are made of different material. Such limitation is met by Li, since the dielectric is made of silicon or silica substrate and the optical fiber is a metal coated fiber (col 2 L 22-23 & col 5 L 10-13).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cathy Lam whose telephone number is (571) 272-1538. The examiner can normally be reached on 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Cathy Lam  
Primary Examiner  
Art Unit 1775

cfl  
September 25, 2004